INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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August 8, 2003

TO: Interested Parties / Applicant

RE: **Manchester Tool & Die, Inc. 169-17464-00054**

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision - Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPERAM

August 8, 2003

Robin Brubaker
Manchester Tool & Die, Inc.
601 South Wabash Road
North Manchester, IN 46962-8148

Re: Exempt Construction and Operation Status
169-17464-00054

Dear Mr. Brubaker:

The application from Manchester Tool & Die, Inc., received on June 27, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that your emission source, a tube end forming machinery manufacturing plant located at 601 South Wabash Road, North Manchester, IN 46962-8148, is classified as exempt from air pollution permit requirements. This emission source consists of the following facilities:

(a) One (1) electrostatic air atomized spray paint booth, with a capacity of 0.167 tube end forming machines per hour, utilizing dry filter controls,

(b) Twelve (12) natural gas fired heating units, with a combined capacity of 2.16 million Btu per hour (MMBtu/hr),

(c) One (1) grinding process, with a capacity of 13 pounds of tool steel per hour, controlled by a Torit/Day cartridge collector, and

(d) One (1) boring process with a capacity of 13 pounds of tool steel per hour, controlled by a Torit/Day cartridge collector.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating applied to the metal tube end forming machines shall be limited to 3.5 pounds of VOC per gallon of coating less water for air dried coatings.

2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions from the metalworking operations shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

For a process weight rate of 0.05 tons per hour or less, this rule provides an emission limit of 0.551 pounds per hour.

Pursuant to 326 IAC 6-3-1(b)(15), surface coating manufacturing processes that use less than five (5) gallons per day of are exempt from 326 IAC 6-3-2. Therefore, the paint booth is not subject to 326 IAC 6-3-2.

3. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

   (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

This exemption letter is the second air approval issued to this emission source. Registration 169-6171-00054, issued on July 19, 1996, is now considered obsolete as it has been included in this registration.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Any change or modification which may increase the potential emissions of volatile organic compounds (VOC) to 10 tons per year or more from the equipment covered in this exemption letter, or change the usage of solids-containing coating from the paint booth to five gallons per day or more, must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ARD

cc: File - Wabash County
Wabash County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development
Technical Support and Modeling - Michele Boner

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	**Manchester Tool & Die, Inc.**
Source Location:	**601 South Wabash Road, North Manchester, IN 46962-8148**
County:	**Wabash**
SIC Code:	**3549**
Application No.:	**169-17464-00054**
Permit Reviewer:	**Allen R. Davidson**

On June 27, 2003, the Office of Air Quality (OAQ) received an application from Manchester Tool & Die, Inc. relating to the operation of a tube end forming machinery manufacturing plant located at 601 South Wabash Road, North Manchester, IN 46962-8148, remains classified as registered. This emission source consists of the following facilities:

(a) One (1) electrostatic air atomized spray paint booth, with a capacity of 0.167 tube end forming machines per hour, utilizing dry filter controls,

(b) Twelve (12) natural gas fired heating units, with a combined capacity of 2.16 million Btu per hour (MMBtu/hr),

(c) One (1) grinding process, with a capacity of 13 pounds of tool steel per hour, controlled by a Torit/Day cartridge collector, and

(d) One (1) boring process with a capacity of 13 pounds of tool steel per hour, controlled by a Torit/Day cartridge collector.

History

Manchester Tool & Die, Inc. was issued a registration for a tube end forming machinery manufacturing plant on July 19, 1996.This application is the first since that date.

No operational changes are being made at the plant. However, 326 IAC 2-5.5-2(b) requires existing emission sources with a valid air registration to reapply for approval by December 2000. This application seeks to comply with this rule.

Enforcement Issues

There are no enforcement actions pending against this emission source at this time.

Stack Summary

Stack information will not change as a result of this application.

Recommendation

The staff recommends to the Commissioner that the plant be issued an exemption. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 27, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (3 pages)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential To Emit (tons/year)
PM	1.5
PM-10	1.5
SO_2	0.0
VOC	2.7
CO	0.8
NO_X	0.9

HAP's	Potential To Emit (tons/year)
Toluene	0.10
Methanol	0.09
Methyl Ethyl Ketone	0.03
Methyl Isobutyl Ketone	0.01
Ethylbenzene	0.32
Xylene	1.68
TOTAL	2.23

The potential to emit (as defined in 326 IAC 2-7-1(29)) particulate matter (PM) is less than five tons per year, and the potential to emit volatile organic compounds (VOC) is less than ten tons per year. Therefore, the application does not require review under 326 IAC 2-5.5 and can be classified as exempt under 326 IAC 2-1.1-3.

County Attainment Status

The source is located in Wabash County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wabash County has been designated as attainment or unclassifiable for ozone and for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Federal Rule Applicability

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)

This source is not a major source for Prevention of Significant Deterioration under 326 IAC 2-2. No attainment regulated pollutant has the potential to emit at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source does not have potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it does not have the potential to emit more than one hundred (100) tons per year of any pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Paint Booth

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating applied to the metal tube end forming machines shall be limited to 3.5 pounds of VOC per gallon of coating less water for air dried coatings.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies)

Pursuant to 326 IAC 6-3-1(b)(15), surface coating manufacturing processes that use less than five (5) gallons per day are exempt from 326 IAC 6-3-2. This facility is not subject to 326 IAC 6-3-2 since potential usage is less than five (5) gallons of solids per day.

State Rule Applicability - Grinding and Boring Operations

326 IAC 6-3-2 (Particulate Emissions Limitations)

Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions from the metalworking operations shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

For a process weight rate of 0.05 tons per hour or less, this rule provides an emission limit of 0.551 pounds per hour.

State Rule Applicability - Natural Gas Fired Heating Units

There are no state rules applicable to these facilities.

Conclusion

The operation of these facilities shall be subject to the conditions of the attached exemption letter, No. 169-17464-00054.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Manchester Tool & Die, Inc.
Address City IN Zip: 601 S. Wabash Road, N. Manchester, IN 46962
ID: 169-17464-00054
Reviewer: Allen R. Davidson
Date: 08/11/03

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Quick Dry 350 Enamel	8.86	37.90%	0.0%	37.9%	0.0%	53.20%	1.000	0.167	3.36	3.36	0.56	13.46	2.46	1.41	6.31	65%
#10 Laquer Thinner (cleaning	6.86	82.50%	0.0%	82.5%	0.0%	0.00%	0.050	0.167	5.66	5.66	0.05	1.13	0.21	0.00	ERR	100%

State Potential Emissions **Add worst case coating to all solvents** **0.61** **14.59** **2.66** **1.41**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

The following calculations determine the emission limit under 326 IAC 6-3-2:

E = 4.1 * (0.050 ^ 0.67) = 0.55 lb/hr

0.55 lb/hr * 8760 hr/yr / 2000 lb/ton = 2.41 ton/yr

The following calculations determine the gallon usage under 326 IAC 6-3-1(b)(15):

Sum of [Volume % Non-Volatiles (solids) * Gallons of Material (gal/unit) * Maximum (unit/hr)] * 24 hr/da 2.13 gal solids / day

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Manchester Tool & Die, Inc.
Address City IN Zip: 601 S. Wabash Road, N. Manchester, IN 46962
ID: 169-17464-00054
Reviewer: Allen R. Davidson
Date: 08/11/03

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % HAP#1	Weight % HAP#2	Weight % HAP#3	Weight % HAP#4	Weight % HAP#5	Weight % HAP#6	Weight % HAP#7	Emissions HAP#1 (ton/yr)	Emissions HAP#2 (ton/yr)	Emission s HAP#3 (ton/yr)	Emissions HAP#4 (ton/yr)	Emissions HAP#5 (ton/yr)	Emissions HAP#6 (ton/yr)	Emissions HAP#7 (ton/yr)
Quick Dry 350 Enamel	8.86	1.00000	0.16700					5.00%	26.00%		0.00	0.00	0.00	0.00	0.32	1.68	0.00
#10 Laquer Thinner (cleaning	6.86	0.05000	0.16700	40.00%	35.00%	10.00%	5.00%				0.10	0.09	0.03	0.01	0.00	0.00	0.00
Total State Potential Emissions											**0.10**	**0.09**	**0.03**	**0.01**	**0.32**	**1.68**	**0.00**

METHODOLOGY

Total for all: 2.23

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

LEGEND

HAP#1 = Toluene
HAP#2 = Methanol
HAP#3 = Methyl Ethyl Ketone
HAP#4 = Methyl Isobutyl Ketone
HAP#5 = Ethylbenzene
HAP#6 = Xylene
HAP#7 = n/a

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Manchester Tool & Die, Inc.
Address City IN Zip: 601 S. Wabash Road, N. Manchester, IN 46962
ID: 169-17464-00054
Reviewer: Allen R. Davidson
Date: 08/11/03

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.160	18.9

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.1	0.0	0.9	0.1	0.8

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.987E-05	1.135E-05	7.096E-04	1.703E-02	3.217E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.730E-06	1.041E-05	1.325E-05	3.595E-06	1.987E-05

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98).
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors confirm that the correct factor is used (i.e., condensable included/not included).